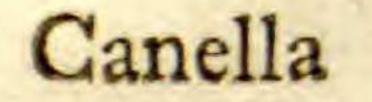
the l(ndo r) rate. 95 which animals it almost equals that of the polype. I do not recollect whether Spallanzani, and others who have attended to the fubject of animal reproductions, have included thele animals in their int. My own experiments were divided thele animals in during which year thele animals are alreaded to every galible direction; and the divided parts, after reproductions, were again int.

IX. The Botanical History of the Canella alba, by Olof Swartz, M.D. Foreign Member of the Linnean Society.

Read December 2, 1788.

THIS tree, the bark of which has frequently been miftaken for the real Cortex Winteranus, has, like many other medicinal plants, been hitherto but imperfectly known to botanifts. Clufius is the first who has recorded the introduction of this bark from the West-Indies, which feems to have been at the beginning of the feventeenth century; as he fays in his *Exot*. lib. iv. cap. 4, de Canella alba quorundam, "Ante paucos annos (before 1605) cœpit exoticus cortex inferri, cui nomen Canellæ albæ indiderunt;" and it confequently became first known about 20 years after Winter's return from the Straits of Magellan; whose bark we also find to have been first mentioned and described by *Clusius, in notis in Garciam*, p. 30, under the name of Cortex Winteranus, as a compliment to the discoverer.

CASPAR BAUHIN mentions our bark feveral times in his Pinax; and calls it, p. 409, Pfeudo-caffia cinnamomea Americana. Canella Peruana.



and magnified.

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Sir

Canella tubis minoribus alba; and, p. 461, Caffia lignea Jamaicenfis laureolæ foliis fubcinereis, cortice piperis modo acri *.

PARKINSON gave, a fhort time after (*Theatr.* p. 1581), a prolix detail concerning the difference between these two kinds of bark, and tells us it was a common thing in his time to mistake one for the

other, a cheugh a hand // ours out that the true when he deurodt ; mise

But JOHN BAUHIN feems to have first confounded the names, by styling the Cortex Winteranus, Canella alba. *Hist.* t. i. l. 4, p. 460.

PLUKENET, who probably knew fomething more of the tree than its bark only, found great difficulty in diffriminating the fynonyma; as he fays, in his Almag. Mant. p. 40, "Varie inter fe plurimum diverfæ plantæ per illarum ignorationem plane confunduntur." But he does not himfelf correct this fault, as he gives a very falfe reprefentation of a branch from the tree, that yields the true Winter's Bark (*Phytogr.* tab. S1, f. 1), which he certainly never faw. He has however enumerated the former in his Almageft, p. 89, under the name of Caffia cinnamomea; feu, Cinnamomum fylveftre Barbadenfium, arbor baccifera, fructu calyculato 4 pyreno, folio enervi. DALE (*Pharmacolog.* p. 296) very precifely indicates, that Cortex Winteranus is very fcarce in the fhops, and that the apothecaries fupply the want of it with the bark of Canella alba.

* Several authors have formerly given this tree different names; as Canella Cubane. Jonf. dendr. 165.

Arbor Jucaiæ. Nieremb. 294.
Arbor cujus cortex gingiber æmulatur. Laet. 24.
Lignum feu potius cortex aromaticus. Ejufd. in scholio ad Cap. de Lignis aromaticis. Monard. p. 324, &c.

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Sir HANS SLOANE, we find, was convinced of the difference between them, as he gave feparate defcriptions of each, in the Tranfactions of the Royal Society. Notwithstanding this, he feems to be in fome doubt (probably through want of fystematic knowledge) if the difference might not depend upon the place of growth : at least, he fays, the one may ferve as a good fuccedaneum for the

other; though he confesses that the true Winter's Bark is much the more aromatic of the two.

The Canella alba is to be found as well in the *Transactions*, No. 192, p. 462, as in the *History of Jamaica*, vol. ii. p. 87; where the author calls it

Arbor baccifera laurifolia aromatica, fructu viridi calyculato. The botanical diffinction was afterwards paid very little attention to by feveral writers on the Materia Medica; as Lemery, Pomet*, &c. And it is to be fupposed that they have led Linnaus (not attending to the evidence of the old botanists) into this error of combining two different genera under the name of Laurus Winterana 7: but he separated this species from Laurus, in the ensuing editions, as a distinct genus, and called it Winterania; under which name it has been univerfally but improperly known. This mistake has however been fully developed by the late difcovery of the Cortex Winteranus of Clusius and Sloane, a production of Wintera aromatica (from the neighbourhood of the antarctic regions), whose existence has remained in oblivion nearly a century, fince it made its first appearance in the Transactions of the Royal Society, in the year 1692. It is the late Dr. Fothergill who has, with the affiftance of Dr.

* Lemery, Diet. des Drogues, p. 170. Pomet, Hist. des Drogues, p. 147. + Spec. Plant. ed. 1, p. 371, n. 11. Hort. Cliff. 448. Mat. Med. 66. 196.

Solander,

of the Canella alba.

Solander, handed down to posterity the real marks of that new genus, in vol. v. of Med. Obf. and Inq. p. 46 & feq. As, however, even of late, * there has been a relation supposed between those two genera, the following description, taken from a number of perfect specimens, will remove all doubt of their being

totally distinct.

Canella alba is a tree whofe ftem rifes from 10 to 50 feet in height, very straight and upright, and branched only at the top. The bark is whitish, by which it is commonly known at first fight in the woods.

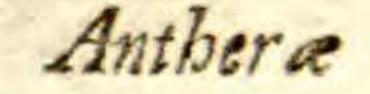
The branches are erect, and not fpreading. The leaves are petiolated, and grow in an alternate order, but not regularly. They are oblong, pointed at the end, entire in the margin, and without any diftinct nerves or veins; of a dark green hue, a thick confiftence, like those of laurel, and shining. The flowers grow at the tops of the branches in clusters, but

upon divided footstalks: they are fmall and feldom open, and of a violet colour.

The character of the flowers is as follows in botanical language,
which is the most proper and expressive.
CAL. Perianthium monophyllum 3 lobum.
Lobi ad basin fere divisi, fubrotundi, concavi, incumbentes, virides, glabri, membranacei, persistentes.
COR. Petala 5 calyce longiora, oblonga, fessilia, concava, erecta, duo paulo angustiora, consistentia, decidua.
Nectarium urceolatum, longitudine petalorum, antherife-

rum, deciduum. Sтам. Filamenta nulla.

* Linn. Suppl. p. 247. 02



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Antheræ 21 lineares parallelæ, distinctæ, longitudinaliter nectario extus adnatæ, univalves. Pollen luteum. As, hawever, even of late, & there has he Pist. Germen superum, intra nectarium, ovatum. Stylus cylindricus, longitudine nectarii. Partier of nertent Stigmata duo, obtufa, convexa, rugofa. PER. Bacca oblonga unilocularis 2-4 sperma. Semina subrotundo-reniformia, nauco fragili nitenti tecta. The distinguishing marks deduced from this character are, The basic Calyx trilobus. in the woods. Corolla pentapetala. Antheræ 21, adnatæ nectario urceolato. Bacca unilocularis, 2-4 sperma. This genus, whole name is more properly changed to that of Canella, cannot be removed from dodecandria, where it has formerly been, notwithstanding its flowers bear some similarity to those of the fixteenth class. But on the fame principle, Melia, Trichilia, Samyda, Erythroxylon, &c. should also change their place, which feems not very just, as they cannot be ranged among the Columniferæ, the natural tribe of that class. There are various figures given of this plant by feveral authors; as by PLUKENET, in the Phytogr. tab. 160, f. 1; by SLOANE, in the History of Jamaica, vol. ii. tab. 191, f. 2, and in the Philosophical Transact. 1692, No. 192; by CATESBY, in his History of Carolina, vol. ii. p. 50, tab. 50; by Mrs. BLACKWELL, in her Icon. tab. 206; and, lastly, by BROWNE, in his Natural History of Jamaica, tab. 27, f. 2. The laft is the only tolerable one among them all; but it feems so little understood by Browne himself, that he has referred Breynia fruticosa, fol. singularibus oblongo-ovatis superne nitidis, &c. Hist. of Jam. p. 246, n. 3, to this figure, evidently that of the Canella alba,

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of the Canella alba. IOI

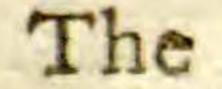
of whose parts of fructification he has annexed another drawing on the fame plate (fig. 3), though lefs accurate and diftinguishable. The tree is pretty common in most parts of the West-India Islands, and is frequently found near the fea-coaft, but then feldom exceeding 12 or 15 feet : in the inland woods it attains a more confiderable height.

The whole tree is very aromatic, and when in bloffom perfumes the whole neighbourhood. The flowers dried, and foftened again in warm water, have a fragrant odour, nearly approaching to that of musk. The leaves have a strong fmell of laurel. The berries, after having been some time green, turn blue, and become at last of a black gloffy colour, and have a faint aromatic tafte and fmell. They are when ripe, as well as the fruit of feveral kinds of laurel, very agreeable to the White-bellied and Bald-pate Pigeons (Columba Jamaicenfis & leucocephala), which feeding greedily upon them, acquire that peculiar flavour fo much admired in the places where they are

found.

This bark, together with the fruit of Capficum, were formerly common ingredients in the food and drink of the Caraibs, the ancient natives of the Antilles; and even at present it makes a necesfary addition to the meagre pot of the Negroes. It is not necessary to expatiate further upon the medicinal qualities of this bark, as it has been for ages in high repute, and occupies in the prefent Pharmacopœia the room of the old bark of Winter, which by the London Committee was thrown out of the New Materia Medica, as a drug not lefs rare than hitherto imperfectly

known; and there is no doubt that Canella alba may with advantage be substituted in its room.



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The annexed plate (t. 8) represents a branch of the tree in flower, and the berries of their natural fize.

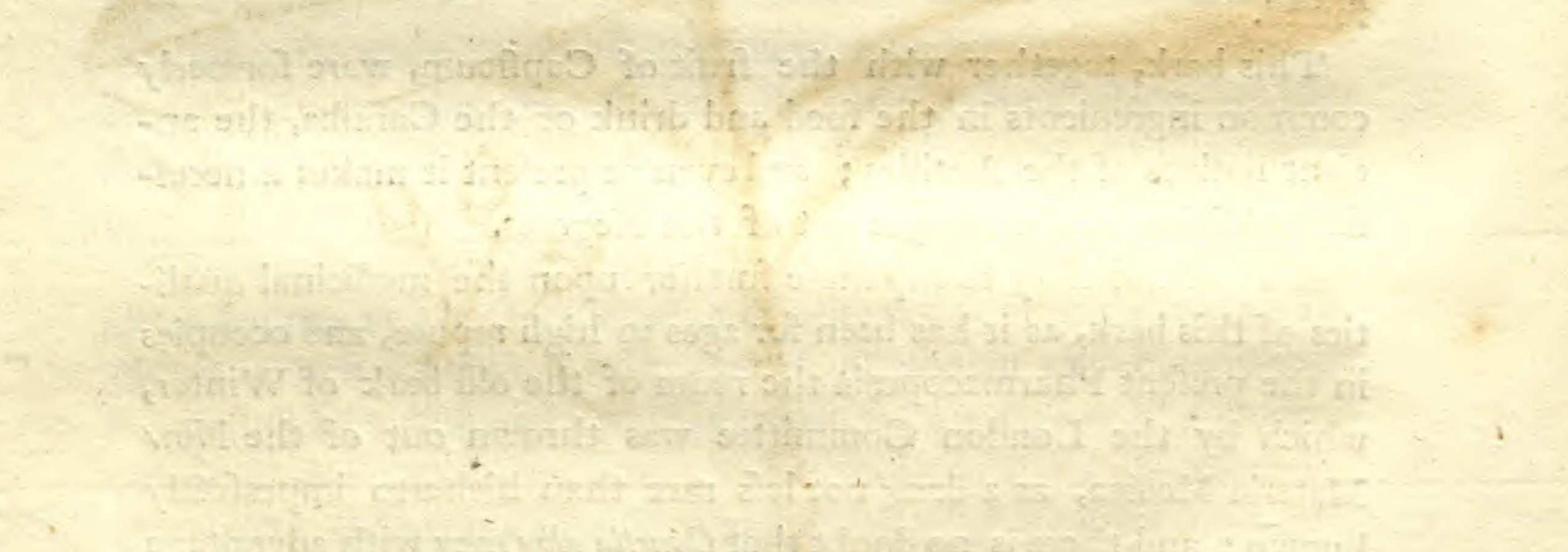
- a, A flower, with its petals forcibly expanded.
- b, The fame magnified, fo as to shew the infertion of the nectarium in the middle.
- c, The nectarium magnified separately, with the anther æ longitu-

dinally inferted.

d, The fame cut through on one fide, and extended, exhibiting twenty-one linear antheræ.

e, The piftillum standing on the three-lobed calyx magnified, with the two stigmata.

f, The bacca of its natural fize, transversely cut, with one feed remaining fixed to the fide.
 g, The feeds of the natural fize.



X. Descrip-